OE FORM 6000, 2/69

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION

# ERIC REPORT RESUME

| ERIC ACC. NO. | | | | |
|---|---|---|---|---|
| ED 032 394 | | | | |
| CH ACC. NO. | P.A. | PUBL. DATE | ISSUE | |
| VT 008 177 | | 68 | RIEJAN70 | |

IS DOCUMENT COPYRIGHTED? YES ☐ NO ☒
ERIC REPRODUCTION RELEASE? YES ☐ NO ☒
LEVEL OF AVAILABILITY I ☒ II ☐ III ☐

AUTHOR

TITLE
The National Apprenticeship Program.

| SOURCE CODE | INSTITUTION (SOURCE) |
|---|---|
| FGK45111 | Manpower Administration (DOL), Washington, D.C. Bureau of Apprenticeship and Training |
| SP. AG. CODE | SPONSORING AGENCY |
| | |

| EDRS PRICE | CONTRACT NO. | GRANT NO. |
|---|---|---|
| 0.25;1.75 | | |
| REPORT NO. | | BUREAU NO. |
| | | |

AVAILABILITY

JOURNAL CITATION

DESCRIPTIVE NOTE
33p.

DESCRIPTORS *Apprenticeships; *Occupations; Agencies; *Standards; *Reference Materials

IDENTIFIERS
*National Apprenticeship Program

ABSTRACT
Current apprenticeable occupations and trades are listed and the apprenticeship program is explained. Addresses of regional offices of the Bureau of Apprenticeship and Training and state apprenticeship agencies are given. (EM)

GPO 870-390

ED032394

# THE NATIONAL APPRENTICESHIP PROGRAM

VT008177

U.S. DEPARTMENT OF LABOR

MANPOWER ADMINISTRATION

1968 edition

Our country is requiring increasingly greater numbers of highly trained men to keep pace with our rapidly expanding economy and changing technology. Apprenticeship is an excellent means for a young man to develop skills. As such, it makes a major contribution to our Nation's industrial growth.

Lyndon B. Johnson

# FOREWORD

This booklet presents a brief explanation of the National Apprenticeship Program, including its policies and their application in modern industry.

Through a Congressional mandate, the Bureau of Apprenticeship and Training of the U.S. Department of Labor has the responsibility to encourage the establishment of apprenticeship programs and to help improve existing programs. The Bureau itself does not conduct training programs.

One of the prime objectives of the Bureau is the promotion of cooperation and effort by management and organized labor groups in the development of such programs. It is entirely the prerogative and responsibility of management and labor to determine apprenticeship needs in their specific industries, to decide on types of training, to select those to be hired as apprentices, and to administer these programs.

A complete list of current apprenticeable occupations and trades are included in this booklet. Further information may be obtained from the Bureau's regional offices or from the national office in Washington, D.C.

**HUGH C. MURPHY**
**Administrator**

# THE NATIONAL APPRENTICESHIP PROGRAM

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

U.S. DEPARTMENT OF LABOR
Willard Wirtz, Secretary

Manpower Administration
Stanley H. Ruttenberg, Administrator

Bureau of Apprenticeship and Training
Hugh C. Murphy, Administrator

# THE NATIONAL APPRENTICESHIP PROGRAM

Why the national apprenticeship program?

The greatest single investment that we as a people have is in our skills and know-how. It is imperative that we guard this investment carefully. Our future progress and strength as a nation depend upon a conscious concern with our manpower resources—their training and ultimate skills.

These resources play an important role in the daily life of every American family. We depend upon them for our housing, our public utilities, and our transportation. They assist in making possible our health services, and help operate our communication systems. They produce and repair our automobiles, telephones, television sets, radios, refrigerators, vacuum cleaners, and washers. We look to them for our home repairs, our daily newspapers, our books, and our magazines. In times of national stress, we depend upon them for the weapons, vehicles, ships, planes, tanks, and other items necessary for the protection of our homes and the preservation of our way of life.

On the industrial front, the skilled craftsman transforms the ideas and diagrams of the scientist and engineer into the finished product. He builds, installs, operates, and services the machines in our factories, shops, and offices. He helps to build and maintain our atomic installations, and performs many and varied jobs essential to the smooth running of our giant industrial machine.

The degree of skill possessed by the individual worker determines the quality of the job that he is able to perform for the manufacturer, the contractor, or the homeowner. To develop his highest skills, he must have training.

The national apprenticeship program provides the opportunity to bring together in a common effort those persons who have something to contribute to the effective training of youth entering industry. It provides for guidance and leadership to youth wishing to become skilled craftsmen in their chosen trades. Equally important, it provides for the guidance and foresight necessary to keep training practices abreast of changing industry needs.

When jobs to be performed require extensive trade knowledge and skill, training must be correspondingly complicated. Training for craftsmanship involves preparation, not for a simple skill, but for the many types of related practices that may be given to a competent craftsman. Apprenticeship is the recognized method of learn-

ing a skilled trade. The training of craftsmen depends in large measure on day-to-day practice under the supervision of skilled journeymen. It is combined with classroom training designed to improve on-the-job work and to strengthen the knowledge of the trade.

In current practice, apprenticeship provides a job at the same time that it maintains a long-term program. Most current apprenticeship programs outline a four-year curriculum of on-the-job experience and related instruction. The apprentice is recognized as an employed worker.

## What Is APPRENTICESHIP?

Apprenticeship, in its simplest terms, is training for those occupations commonly known as skilled crafts or trades that require a wide and diverse range of skills and knowledge, as well as maturity and independence of judgment.

As practiced by modern industry, apprenticeship is a business-like system in which the young worker entering industry is given thorough instruction and experience, both on and off the job, in all the practical and theoretical aspects of the work in a skilled trade.

As the apprentice progresses in his training, he acquires new skills and masters the application of those already learned. This enables him to be productive during his entire period of apprenticeship.

When properly supervised, the apprentice pays his way in production and becomes an increasingly valuable man as he progresses in his training and knowledge. Thus apprenticeship is a sound investment.

## What Apprenticeship Can Do

Well-planned, properly supervised apprenticeship can do these important things:

- √ provide the most efficient way to train all-round craftsmen to meet present and future needs
- √ assure an adequate supply of skilled tradesmen, in relation to employment opportunities
- √ assure the community of competent craftsmen, skilled in all branches of their trades
- √ assure the consuming public of those quality products and services that only trained hands and minds can produce
- √ increase the individual worker's productivity
- √ give the individual worker a greater sense of security
- √ improve employer-employee relations
- √ eliminate close supervision because the craftsman is trained to use initiative, imagination and ability in planning and performing his work
- √ provide a source of future supervision
- √ provide the versatility necessary to meet changing conditions
- √ attract capable young men to the industry
- √ generally raise skill levels in the industry

For the young worker entering employment, apprenticeship holds these important values:

- √ the opportunity to develop his highest skills, creating a greater demand for his services throughout industry, and assuring him of greater economic security and a higher standard of living
- √ further training and education—with pay
- √ assurance of a wage while he is serving his apprenticeship, with regular increases
- √ opportunities for employment and advancement
- √ recognition as a skilled craftsman in his chosen trade

## Role of the Bureau of Apprenticeship and Training

As part of the United States Department of Labor's Manpower Administration, the Bureau of Apprenticeship and Training stimulates and assists industry in the development, expansion, and improvement of apprenticeship and training programs designed to provide the skills required by an economy that is becoming increasingly complex.

One of the most far-reaching aspects of our expanding economy has been an acceleration of research and industrial technology. As a result, major developments are being telescoped into a comparatively short time. This acceleration has brought about an unprecedented and sustained demand for skills. Any substantial change—

within the foreseeable future—in the need for developing and improving the skills of our workers will be upward.

Since its establishment, the Bureau of Apprenticeship and Training has made available to management and labor the services of its staff in developing and improving apprenticeship and other industrial training programs.

The Bureau's principal functions are to encourage the establishment of sound apprenticeship and training programs and to provide technical assistance to industry in setting up such programs. In the performance of these functions, the Bureau is guided by the Federal Committee on Apprenticeship, comprised of leaders of management, labor, and vocational education. The Bureau works closely with State apprenticeship agencies, trade and industrial education institutions, and management and labor.

Through its field staff, with offices in every State, the Bureau works with local employers and employees in developing apprenticeship and industrial training programs to meet specific needs.

## How the National Apprenticeship Program Operates

The American apprenticeship system is based on voluntary cooperation among management and labor, industry and Government, and the shop and the school.

This voluntary cooperation is reflected by national joint management-labor apprenticeship committees. These committees have been set up by national employer associations and international labor unions to work out suggestions and methods for the development and improvement of apprenticeship and other training within their respective trades or industries.

Similar cooperation in apprenticeship—involving management, labor, education, and Government—exists at the State level. Since the employment and training of apprentices takes place in the local community, the work of national and State apprenticeship groups is directed toward stimulating interest in training on the part of local employers and employees.

## State Apprenticeship Agencies

Apprenticeship agencies have been established by a number of States and Territories within their respective Departments of Labor. They obtain policy guidance from management-labor councils. A number of the State apprenticeship agencies have staffs to assist employers and labor in developing apprenticeship programs. Their work is carried on as an integral part of the national apprenticeship program.

## Management-Labor Cooperation

The degree of management-labor cooperation varies in apprenticeship according to the wishes of those concerned. Joint apprenticeship committees, equally representative of management and labor, have proven effective in many industries. For example, they have been particularly successful in establishing and operating apprenticeship programs in the construction and printing industries. Joint committees are created in plants having organized workers.

## Basic Standards of a Good Apprenticeship Program

An effective apprenticeship program should provide for the following:

√ the starting age of an apprentice to be not less than 16
√ full and fair opportunity to apply for apprenticeship
√ selection of apprentices on the basis of qualifications alone
√ a schedule of work processes in which an apprentice is to receive training and experience on the job
√ organized instruction designed to provide the apprentice with knowledge in technical subjects related to his trade (a minimum of 144 hours per year is normally considered necessary)
√ a progressively increasing schedule of wages
√ proper supervision of on-the-job training with adequate facilities to train apprentices
√ periodic evaluation of the apprentice's progress, both in job performance and related instruction, and the maintenance of appropriate records
√ employee-employer cooperation
√ recognition for successful completions
√ non-discrimination in all phases of apprenticeship employment and training

## Public Recognition

Recognition of an apprenticeship program can be given by a State apprenticeship agency or by the Bureau of Apprenticeship and Training through registration of the program with either of these agencies.

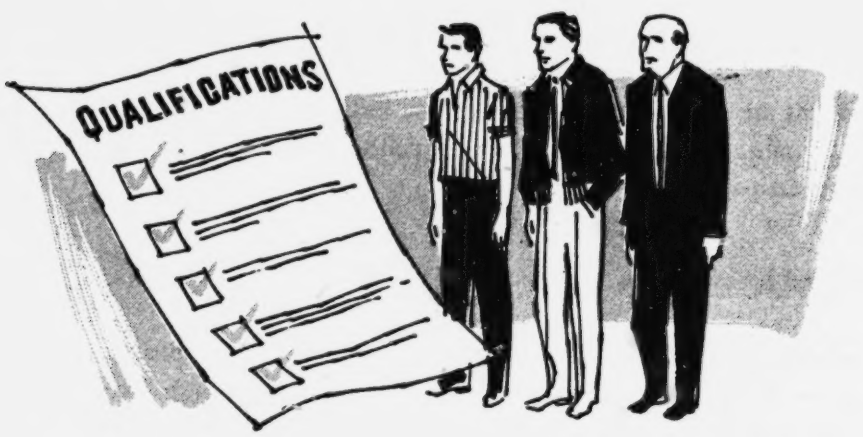
Certificates of Completion of Apprenticeship, attesting to the mastering of his trade by the individual apprentice are likewise available through State apprenticeship agencies or the Bureau of Apprenticeship and Training.

## Supplemental Instruction

Apprenticeship programs combine on-the-job training and work experience with related instruction in the theoretical aspects of a trade.

The on-the-job training and work experience of the machinist apprentice, for example, is usually supplemented by related instruction in trade theory, blueprint reading, mechanical drawing, safe working practices, trade mathematics, physics, and other subjects related to the job.

Responsibility for seeing that necessary related knowledge is provided rests with program sponsors. In most instances, this instruction is given in local trade or vocational schools. In other instances, sponsors develop course materials and conduct their own related instruction programs, use supervised correspondence courses, or seek the services of consultants.




## Qualifications of Apprenticeship

To qualify for apprenticeship in any of the skilled trades, a young person must have more-than-ordinary ability to work with his hands, as well as his head. To be successful, he must have perseverance, ambition, and initiative. Many program sponsors prefer high school graduates.

Since selection and entrance requirements are demanding, the applicant should have above average aptitude and physical fitness for the trade.

Increasingly, emphasis is being placed on the need for a background in mathematics and science.

Usually, apprentices are between 16 and 24 years of age.

## Deferment of Apprentices

Upon request of the local program sponsor, State directors of Selective Service are authorized to accept for deferment purposes apprentice training programs which meet its regulations. The request must be accompanied by a certification from the registration agency that the program has been in operation at least 1 year, and 1 or more apprentices have been in training during that time in each occupation covered.

292-752 O - 68 - 2

After the program has been accepted, the program sponsor and the apprentice may request the local board to defer the apprentice. The request must be accompanied by a certificate of the sponsor that his program has been accepted by the State Director of Selective Service for the State in which the program is being operated, and that the registrant currently is meeting all the standards and requirements of the apprenticeship program and is satisfactorily performing and progressing in his on-the-job training and related trade instruction.

The decision as to actual deferment rests with the local board, subject to appeal if the request is denied.

Detailed information and necessary forms may be obtained from the nearest field representative of the Bureau of Apprenticeship and Training or State apprenticeship agency.

## Where Apprentices Are Employed

Apprentices are in training in every major industry. The young person considering apprenticeship has many trades from which to choose. A list of principal occupations begins on page 9.

## Apprenticeable Occupations

Occupations recognized by the Federal Committee on Apprenticeship are those that customarily have been learned in a practical way through two or more years' training and work experience on the job, and that are clearly identified and commonly recognized throughout industry. Occupations that traditionally have *not* used apprenticeship are:

- √ selling, retailing, or similar occupations in the distributive field
- √ managerial occupations
- √ clerical occupations
- √ professional and semiprofessional occupations
- √ agricultural occupations

## Where To Apply

Application for apprenticeship may be made to an employer direct, to the local labor union in the trade selected for a career, to a local joint apprenticeship committee, or to the local State employment service office.

# APPRENTICEABLE OCCUPATIONS

Listed on the following pages are apprenticeable occupations included in programs of apprenticeship registered with State apprenticeship agencies or the Bureau of Apprenticeship and Training.

The customary term of apprenticeship, in years, is shown for each. In some instances, a range in years is included, representing varying training practices in different industries or localities. Where possible, apprenticeable titles have been identified by code number relating them to jobs defined in the Dictionary of Occupational Titles published by the United States Department of Labor, Bureau of Employment Security.

The list of apprenticeable occupations is not to be considered final nor all-inclusive. Changes are necessary from time to time because of technological advancements in industry.

## Occupational Listing

(The basic trade classifications are shown in capital letters.)

[Code numbers from the Dictionary of Occupational Titles have been used merely as a convenient method of providing reference to a description of the work involved in each of the apprenticeable occupations listed.]

Accessories Mechanic (air transportation; aircraft manufacturing). *See under* AIRPLANE MECHANIC.

Accordion Maker (musical instruments). *See under* MUSICAL-INSTRUMENT MECHANIC.

Aircraft-Assembly Mechanic (aircraft manufacturing). *See* AIRCRAFT FABRICATOR.

Aircraft-and-Engine Mechanic (air transportation; aircraft manufacturing). *See* Airplane Mechanic under AIRPLANE MECHANIC.

**AIRCRAFT FABRICATOR:** Aircraft-Assembly Mechanic (aircraft manufacturing) 3–4 years. 621.381 and 806.381 and 806.781 and 862.381.

Aircraft Machinist (air transportation; aircraft manufacturing). *See under* MACHINIST.

Aircraft Mechanic (air transportation; aircraft manufacturing). *See under* AIRPLANE MECHANIC.

Aircraft Metalsmith (air transportation; aircraft manufacturing). *See under* SHEET-METAL WORKER.

Aircraft Painter-Doper (air transportation; aircraft manufacturing). *See under* Pinter-and-Decorator.

Aircraft Plater (aircraft manufacturing). *See under* ELECTROPLATER.

**AIRPLANE MECHANIC** (air transportation; aircraft manufacturing). 3–4 years.

Accessories Mechanic 621.281.
Aircraft Mechanic 631.281.
Airplane Mechanic; aircraft and engine mechanic 621.281.
Electrical Mechanic 825.381.
Engine Mechanic 621.281.
Helicopter Mechanic 621.281.
Instrument Mechanic 710.281.
Line Service Mechanic 621.281.
Propeller Mechanic 621.281.
Radio Mechanic 823.281.

Airplane Woodworker (aircraft manufacturing). *See under* CABINETMAKER-MILLMAN.

Alteration Tailor (retail trade). *See under* TAILOR.

Anodizer (electroplating). *See under* ELECTROPLATER.

**ARBORIST** (any industry). 3 years 409.181; 407.181; 304.887.
Architectural Draftsman (any industry). *See under* DRAFTSMAN-DESIGNER.
Armament Mechanic (firearms). *See* Artillery Repairman.

Artificial Eye Maker 713.281. *See under* ORTHOPEDIC-PROSTHETIC TECHNICIAN.
Artificial-Limb Maker, Metal (surgical-dental appliances). *See* Prosthetist.
Artificial-Limb Maker, Wood (surgical-dental appliances). *See* Prosthetist.
Artillery Repairman (firearms; ordnance). *See under* MAINTENANCE MECHANIC-REPAIRMAN.

**ASBESTOS WORKER:** Insulation Worker (construction; heat and frost insulation) 4 years 863.884.
Auto Glass Installation Worker (automotive service). *See under* GLAZIER-GLASS WORKER.
Auto-Test-Vehicle-Chassis Mechanic (ordnance). *See* Mobile-Military-Equipment Mechanic.
Automobile-Body Repairman (automotive service). *See under* AUTOMOTIVE BODY BUILDER REPAIRMAN.
Automobile Glazier (automotive service). *See* Auto Glass Installation Worker.
Automobile Machinist (automotive service). *See under* MACHINIST.
Automobile Mechanic (automotive service). *See under* AUTOMOTIVE MECHANIC.
Automobile Painter (automotive service). *See under* PAINTER-AND-DECORATOR.
Automobile Upholsterer (automotive service). *See under* UPHOLSTERER.

**AUTOMOTIVE BODY BUILDER-REPAIRMAN** (automobile manufacturing; automotive service) 3–4 years.
Automobile-Body Repairman 807.381.
Custom-Body Builder, Metal 807.281.
Custom-Body Builder, Wood 807.281.
Truck-and-Trailer-Body Builder 807.281.
Automotive-Test-Engine Mechanic (ordnance). *See* Mobile-Military-Equipment Mechanic.

**AUTOMOTIVE MECHANIC** (automotive service; ordnance) 3–4 years.
Automobile Mechanic 620.281.
Bus Mechanic 620.281.
Heavy-Duty-Equipment Mechanic; construction-equipment mechanic; diesel repairman 625.281.
Mobile-Military-Equipment Mechanic; automotive-test-engine mechanic; autotest-vehicle-chassis mechanic 620.381 and 625.281.
Motorboat Mechanic 623.281.
Motorcycle Mechanic 620.281.
Tractor Mechanic 620.281.
Truck Mechanic 620.281.

**BAKER** (bakery products; hotel and restaurant) 3 years. 526.781 and 313.781
Bakery-Equipment Mechanic 629.281. *See under* MAINTENANCE MECHANIC-REPAIRMAN.
Bank-Note Designer (printing and publishing). *See under* DRAFTSMAN-DESIGNER.
Bank-Note Engraver (Engraving). *See under* ENGRAVER.
**BARBER** (personal service) 2 years. 330.371.
Battenmaker (textile). *See under* WOOD CARVER.
Beauty Operator (personal service). *See* COSMETICIAN.
Ben-Day Artist (printing and publishing). *See* Tint Layer.
Bench Carpenter (furniture; woodworking). *See* Cabinet Maker.
Bench Hand (Jewelry). *See* Jewelry Repairman.
Benchman (optical goods). *See* Ophthalmic Finisher.
Bindery Worker, Female (printing and publishing). *See under* BOOKBINDER.
Bindery Worker, Male (printing and publishing). *See under* BOOKBINDER.

**BLACKSMITH** (any industry) 4 years 610.381.
Hammersmith 612.381; 611.782; 612.782.
Sawsmith; saw straightener-and-repairer (saw manufacturing). 3 years. 701.381.

Spring Maker, Automotive; spring fitter-repairer (automobile manufacturing; automotive service) 610.381; 619.380.
Tool Dresser 610.381.
Tool Sharpener (stoneworking) 2 years. 610.381.

Boatbuilder, Steel (shipbuilding). *See under* IRON WORKER.

Boatbuilder, Wood (shipbuilding). *See under* CARPENTER.

**BOILERMAKER** (any industry) 4 years. 805.281.

Boilermaker, Field Erection and Repair (construction) 4 years. (6,000 hours minimum.) 805.281.
Mold Loftsman; template maker (aircraft manufacturing; boiler making; shipbuilding). 661.381; 601.381; 809.381.
Shipfitter (shipbuilding) 806.381.

**BOOKBINDER** (printing and publishing).
Bindery Worker, Female 2 years. 977.884.
Bindery Worker, Male 4 years. 977.884.
Paper Ruler 3 years. 659.782.

Bookbinding-Machines Mechanic (printing and publishing). *See under* MAINTENANCE MECHANIC-REPAIRMAN.

Boot-and-Shoe Maker, Custom (boot and shoe manufacturing). *See under* LEATHER WORKER.

Boot Maker, Custom (boot and shoe manufacturing). *See* Boot-and-Shoe Maker, Custom.

Bottomer, Customer Shoes (boot and shoe manufacturing). *See under* LEATHER WORKER.

Brace Maker (surgical-dental appliances). *See* Orthotist.

Bread Wrapper-and-Label Pressman (printing and publishing). *See* Specialty Pressman.

**BREWER** (malt liquors) 2–3 years. 522.782; 526.885; 029.381.

**BRICKLAYER:** Brickmason (construction) 3 years. 861.381.

Brickmason (construction). *See* BRICKLAYER.

Bridge-and-Structural-Steel Erector (construction). *See under* IRON WORKER.

Brilliandeerer (jewelry). *See* Lapidary.

Broadcast Technician (broadcast-telecast). *See* Radio Electrician.

Burglar-Alarm Mechanic (any industry). *See* Signal-System Electrician.

Bus Electrician (transportation). *See under* ELECTRICAL WORKER.

Bus Mechanic (automative service). *See under* AUTOMOTIVE MECHANIC.

Bushelman (retail trade). *See* Alteration Tailor.

Business-Machines Mechanic (any industry.) *See under* MAINTENANCE MECHANIC-REPAIRMAN.

Butcher (slaughtering and meat packing). *See under* BUTCHER-MEAT CUTTER.

**BUTCHER-MEAT CUTTER** (retail trade; slaughtering and meat packing) 3 years.
Butcher 525.381.
Meat Cutter 316.884; 316.781.

Buttermaker (dairy products). *See under* DAIRY-PRODUCTS MAKER.

Cabinetmaker (furniture; woodworking). *See under* CABINETMAKER-MILLMAN.

**CABINETMAKER-MILLMAN** (any industry).
Airplane Woodworker (aircraft manufacturing) 3–4 years. 769.281; 621.281.
Cabinet Maker; bench carpenter (furniture; woodworking) 3–4 years. 660.280.
Casket Masker (mortician goods) 2–3 years. 739.781.
Furniture Maker-Repairman (furniture) 3–4 years. 660.280.
Millman; shop carpenter (woodworking) 3–4 years. 669.380.

Cableman (construction; light and power). *See* Cable Splicer.

Cable Splicer (construction; light and power). *See under* ELECTRICAL WORKER.

Cable Splicer (telephone and telegraph). *See under* TELEPHONE WORKER.

Camera Man (printing and publishing). *See under* LITHOGRAPHER.

Camera Repairman (any industry). *See under* MAINTENANCE MECHANIC-REPAIRMAN.

**CANDY MAKER** (confection) 3–4 years. 529.381.

**CANVAS WORKER** (any industry) 3 years.
- Sailmaker (shipbuilding) 739.381.
- Tent-Awning Maker (canvas goods) 787.782.

Cap Cutter (hat and cap). *See under* FABRIC CUTTER.
Card-Room Mechanic (textile). *See under* TEXTILE TECHNICIAN-MECHANIC.

**CARMAN** (locomotive and car building and repair) 4 years. 622.381. .

**CARPENTER** (any industry) 4 years.
- Boatbuilder, Wood (shipbuilding) 860.381.
- Carpenter (construction) 860.381.
- Carpenter, Maintenance (any industry) 860.281.
- Joiner (shipbuilding) 860.381.
- Loftsman (shipbuilding) 661.381; 661.131.
- Mold Maker, Wood (brick and tile) 769.781.
- Shipwright (shipbuilding) 860.381.

Carpenter (construction.) *See under* CARPENTER.
Carpenter, Maintenance (any industry). *See under* CARPENTER.
Casket Maker (mortician goods). *See under* CABINET MAKER-MILLMAN.
Caster (construction). *See under* PLASTERER.
Caster (pottery and porcelain). *See under* POTTERY WORKER.
Caster-Mold Maker (jewelry). *See under* JEWELER.

**CEMENT MASON** (construction) 3 years. 844.884.
Central Office Installer-Repairman (telephone and telegraph). *See under* TELEPHONE WORKER.
Chaser-Engraver (jewelry). *See* Engraver-Chaser.
Cheesemaker (dairy products). *See under* DAIRY-PRODUCTS MAKER.
Chemical-Process-Equipment Mechanic (chemical). *See under* MAINTENANCE MECHANIC-REPAIRMAN.
Cigar-Making-Machine Mechanic (cigar manufacturing). *See under* MAINTENANCE MECHANIC REPAIRMAN.
Color Mixer (wallpaper). *See under* WALL-PAPER CRAFTSMAN.
Comb Fixer (textile). *See under* TEXTILE TECHNICIAN-MECHANIC.
Combination Man (telephone and telegraph). *See under* TELEPHONE WORKER.
Commercial Artist (any industry). *See under* SIGN, SCENE AND PICTORIAL ARTIST.
Commercial Photographer (any industry). *See under* PHOTOGRAPHER.
Composing-Room Machinist (printing and publishing). *See under* MAINTENANCE MECHANIC-REPAIRMAN.
Composition Roofer (construction). *See under* ROOFER.
Compositor (printing and publishing). *See* PRINTER.
Construction-Equipment Mechanic (construction). *See* Heavy-Duty Repairman.

**COOK** (hotel and restaurant) 3 years. 313.381.
- Pastry Cook 313.381.

**COOPER** (cooperage) 4 years. 764.884.
Copper Etcher (printing and publishing). *See under* PHOTO ENGRAVER.
Coppersmith (sheet metal; shipbuilding). *See under* SHEET-METAL WORKER.
Coremaker (foundry). *See under* FOUNDRYMAN.

**COSMETICIAN:** Beauty Operator (personal service) 2 years. 332.271.
Custom-Body Builder, Metal (automobile manufacturing). *See under* AUTOMOTIVE BODY BUILDER REPAIRMAN.

Custom Tailor (retail trade). *See under* TAILOR.
Cutter (any industry). *See* FABRIC CUTTER.
Cutter-Patternmaker, shoes (boot and shoe manufacturing). *See under* LEATHER WORKER.
Cutting-and-Creasing Pressman (paper box manufacturing). *See under* PRINTING PRESSMAN.
Cutting-Die Maker (any industry). *See under* TOOL-AND-DIE MAKER.
Cylinder Pressman (printing and publishing). *See under* PRINTING PRESSMAN.

**DAIRY-PRODUCTS MAKER** (dairy products) 2–3 years.
Buttermaker 529.782.
Cheesemaker 529.381.

Damper-Waterproofer (construction). *See under* ROOFER.
Decorating-Kiln Placer (pottery and porcelain). *See under* POTTERY WORKER.
Dental-Plate Maker (surgical-dental appliances). *See* Dental Technician.
Dental Technician (surgical-dental appliances). *See under* ORTHOPEDIC-PROSTHETIC TECHNICIAN.
Detailer-Draftsman (any industry). *See under* DRAFTSMAN-DESIGNER.
Diamond-Die Maker (wire drawing). *See under* TOOL-AND-DIE MAKER.
Die-Casting-Die Maker (machine shop). *See under* TOOL–AND-DIE MAKER.
Die Maker (carbide tools). *See under* TOOL-AND-DIE MAKER.
Die Maker (jewelry). *See under* TOOL-AND-DIE MAKER.
Die Maker (machine shop). *See under* TOOL-AND-DIE MAKER.
Die Maker, Paper (paper goods). *See* Cutting-Die Maker.
Die Sinker (machine shop). *See under* TOOL-AND-DIE MAKER.
Die Stamper (printing and publishing). *See under* PLATE-PRINTER.
Diesel Repairman (automobile service). *See* Heavy-Duty Equipment Mechanic.
Dipper (pottery and porcelain). *See under* POTTERY WORKER.

**DRAFTSMAN-DESIGNER** (any industry) 3–5 years.
Architectural Draftsman 001.281.
Bank-Note Designer (printing and publishing) 142.081.
Detailer-Draftsman 017.281.
Electrical Draftsman 003.281.
Engineering Aide 018.587; 018.687.
Mechanical Draftsman 007.281.
Structural Draftsman 005.281.
Tool-and-Die Designer (machine shop) 007.081; 007.181.
Topographical Draftsman 017.281.

Drawing-Frame Fixer (textile). *See under* TEXTILE TECHNICIAN-MECHANIC.

**DRY CLEANER, SPOTTER, AND PRESSER** (cleaning, dyeing, and pressing) 3–4 years, 362.782; 362.381; 363.782.

Duplicating-Machines Repairman (any industry). *See* Business-Machines Mechanic.
Dyer, Master (textile). *See under* TEXTILE TECHNICIAN-MECHANIC.
Earth-Moving Equipment Mechanic. *See under* OPERATING ENGINEER.
Electric-Motor Repairman (any industry). *See* Repairer-and-winder.
Electric-Refrigerator Serviceman (any industry). *See under* ELECTRICAL WORKER.
Electrical-Appliance Serviceman (any industry). *See under* ELECTRICAL WORKER.
Electrical Draftsman (any industry). *See under* DRAFTSMAN-DESIGNER.
Electrical-Instrument Repairman (any industry). *See under* ELECTRICAL WORKER.
Electrical Mechanic (air transportation; aircraft manufacturing). *See under* AIRPLANE MECHANIC.
Electrical Repairman (any industry). *See* Maintenance Electrician.

**ELECTRICAL WORKER** (any industry) 4–5 years.
Bus Electrician (transportation) 825.281.
Cable Splicer; cableman; underground electrician (construction; light and power) 829.381; 821.381.

**ELECTRICAL WORKER—Continued**

Electrical-Appliance Serviceman; Electric-Refrigerator Serviceman (any industry) 3 years. 827.281; 637.281.

Electrical-Instrument Repairman; Pyrometer man 4 years. 779.281.

Electrician; wireman (construction) 4 years. 824.281.

Electronic Technician; radio-television repairman; radio repairman; television repairman (any industry) 720.281; 003.181; 632.281; 828.281.

Lineman; outside electrician (light and power) 3 years. 821.281.

Maintenance Electrician; electrical repairman; industrial electrician (any industry) 829.281.

Meterman; meter-relay tester; meter tester-repairer (light and power) 821.381; 729.281; 710.281.

Power-House Electrician (light and power) 820.281.

Power-Plant-Equipment Mechanic (light and power) 631.281.

Radio Electrician; broadcast technician; radio-station-maintenance electrician; radio-station technician (broadcast-telecast) 823.281.

Radio-Telephone-Communications Technician (telephone-and-telegraph) 823.281.

Repairer-and-Winder; electric-motor repairman; shop electrician (any industry) 721.281.

Ship Electrician; marine electrician (shipbuilding) 825.381.

Sign Electrician (signs) 869.381; 824.281; 729.884.

Signal-System Electrician; burglar-alarm mechanic; fire-alarm mechanic (any industry) 823.281; 829.281.

Electrician (construction). *See under* ELECTRICAL WORKER.

Electronic Technician (any industry). *See under* ELECTRICAL WORKER.

**ELECTROPLATER** (any industry) 3–4 years.

Aircraft Plater (aircraft manufacturing) 501.782.

Anodizer (electroplating) 501.782.

Plater (electroplating) 500.380.

Plater, Plastics (Vacuum System) 500.380.

**ELECTROTYPER** (printing and publishing) 5–6 years, 974.381.

Finisher 659.380.

Molder 974.381.

Wax Engraver 974.381.

Elevator Repairman (construction). *See under* MAINTENANCE MECHANIC-REPAIRMAN.

Embossing Pressman (printing and publishing). *See under* PRINTING PRESSMAN.

Enameler (jewelry). *See under* JEWELER.

Engine Mechanic (air transportation; aircraft manufacturing). *See under* AIRPLANE MECHANIC.

Engineering Aide (any industry). *See under* DRAFTSMAN DESIGNER.

**ENGRAVER** (any industry) 4–5 years.

Bank-note Engraver (engraving) 979.781.

Engraver-Chaser; chaser-engraver (jewelry) 704.381.

Etcher, Hand (printing and publishing) 971.381.

Metal Engraver (engraving) 704.381.

Pantograph Engraver (any industry) 779.782; 704.884; 979.781.

Siderographer (engraving) 979.381.

Steel-and-Copper-Plate Engraver (printing and publishing) 979.781.

Wood-Block Engraver (textile; printing and publishing) 979.281.

Engraver-Chaser (jewelry). *See under* ENGRAVER.

Engraving Pressman (printing and publishing). *See under* PLATE PRINTER.

Envelope-Machine Adjuster (paper goods). *See* Cutting-and-Creasing Pressman.

Etcher, Hand (printing and publishing). *See under* ENGRAVER.

Experimental-Body Builder, Metal (automotive manufacturing). *See* Model Maker, Metal under MODEL MAKER.

Experimental-Body Builder, Wood (automotive manufacturing). *See* Model Maker, Wood under MODEL MAKER.

**FABRIC CUTTER:** Cutter (any industry) 3–4 years.
Cap Cutter (hat and cap) 781.884; 699.885.
Garment Cutter (garment) 781.884; 699.885.
Glove Cutter (leather products) 781.884; 781.887.
Shirt Cutter (garment) 781.887; 781.884.
Upholstery-and-Seat-Cover Cutter (furniture; retail trade) 780.884.

**FARM-EQUIPMENT MECHANIC** (automotive service) 3–4 years. 624.281.

Film Developer-Printer, Motion Picture (any industry). *See under* PHOTOGRAPHER.

Finisher (garment). *See under* TAILOR.

Finisher (optical goods). *See* Ophthalmic Finisher.

Finisher (printing and publishing). *See under* PHOTO ENGRAVER or ELECTROTYPER.

Fire-Alarm Mechanic (any industry). *See* Signal-System Electrician.

Fitter, Custom Shoes (boot and shoe manufacturing). *See under* LEATHER WORKER.

**FLOOR COVERER:** Floor Layer (construction) 3–4 years.
Linoleum, Soft Tile and Carpet Layer; linoleum-and-soft tile layer 864.781.

Floor Layer (construction). *See* FLOOR COVERER.

**FOUNDRYMAN** (foundry).
Coremaker 4 years. 518.381.
Melter 2–3 years. 512.782.
Molder 4 years. 518.381; 518.782; 693.301.

Full-Fashion-Hosiery-Knitting-Machine Mechanic (hosiery). *See* Knitting-Machine Mechanic.

Fur Cutter (fur goods). *See under* FURRIER.

Fur Finisher (fur goods). *See under* FURRIER.

Fur-Machine Operator (fur goods). *See under* FURRIER.

Furniture Finisher (furniture). *See under* PAINTER-AND-DECORATOR.

Furniture Maker-Repairman (furniture). *See under* CABINET MAKER-MILLMAN.

**FURRIER** (fur goods) 3–4 years. 142.081.
Fur Cutter 3–4 years. 783.781.
Fur Finisher 2–3 years. 783.381.
Fur-Machine Operator 2–3 years. 787.782.

Gage Maker (machine shop). *See under* TOOL-AND-DIE MAKER.

Garment Cutter (garment). *See under* FABRIC CUTTER.

Gas-Engine Repairman (any industry). *See under* MAINTENANCE MECHANIC-REPAIRMAN.

Gas Fitter (any industry). *See under* PLUMBER-PIPE FITTER.

Gas-Meter Repairman (light and power). *See under* MAINTENANCE MECHANIC-REPAIRMAN.

Gas Serviceman (public utilities). *See under* MAINTENANCE MECHANIC-REPAIRMAN.

Glass Blower (glass manufacturing). *See under* GLAZIER-GLASS WORKER.

Glass Blower, Laboratory Apparatus (instruments and apparatus). *See under* GLAZIER-GLASS WORKER.

Glass Worker, Shop (construction; glass products). *See under* GLAZIER-GLASS WORKER.

Glassware Engraver-Polisher (glass products). *See under* GLAZIER-GLASS WORKER.

**GLAZIER-GLASS WORKER** (any industry).
Auto Glass Installation Worker; Automobile Glazier (automotive service) 2 years. 865.884.
Glass Blower (glass manufacturing) 3 years. 575.781.
Glass Blower, Laboratory Apparatus (instruments and apparatus) 3–4 years. 772.281.
Glass Worker, Shop (construction; glass products) 3 years. 775.884; 676.885; 574.884.
Glassware Engraving-Polisher (glass products) 2–3 years. 775.381.
Glazier (construction) 3 years. 865.781.
Neon-Tube Bender (signs) 3–4 years. 824.884; 772.381.
Stained-Glass Glazier (glass products) 4 years. 779.381; 865.381.
Window-Glass Cutter (glass manufacturing) 3 years. 579.887.

Glazier (construction). *See under* GLAZIER-GLASS WORKER.
Glove Cutter (leather products). *See under* FABRIC CUTTER.
Goldsmith (jewelry). *See under* JEWELER.
Grade-and-Paving-Equipment-Operator (construction). *See under* OPERATING ENGINEER.
Granite Cutter (stoneworking). *See* Stone Cutter.
Granite Cutter, Sandblaster (stoneworking). *See under* STONE WORKER.
Granite-Lathe Operator (stoneworking). *See* Machine Stone-Cutter.
Granite Sawyer (stoneworking). *See* Stone Sawyer.
Granite Surface Plate Lapper. *See under* STONEWORKER.
Gun Repairman (any industry). *See under* MAINTENANCE MECHANIC REPAIRMAN.
Gunsmith (any industry). *See* Gun Repairman.
Hammersmith (any industry). *See under* BLACKSMITH.
Handler (pottery and porcelain). *See under* POTTERY WORKER.
Hardwood Finisher (furniture). *See* Furniture Finisher.
Harness Maker (leather products). *See under* LEATHER WORKER.
**HEAT TREATER** (heat treating) 4 years. 504.782.
Heavy-Duty-Equipment Mechanic (automotive service). *See under* AUTOMOTIVE MECHANIC.
Helicopter Mechanic (air transportation; ordnance). *See under* AIRPLANE MECHANIC.
Heavy-Duty Repairman (construction). *See under* OPERATING ENGINEER.
Hoisting-and-Portable Engineer (construction). *See* OPERATING ENGINEER.
Hub Cutter (jewelry). *See* Die Maker.
Hydraulic Equipment Mechanic (any industry). *See under* MAINTENANCE MECHANIC REPAIRMAN.
Impression-Die Sinker (machine shop). *See* Die Sinker.
Industrial Electrician (any industry). *See* Maintenance Electrician.
Industrial-Machine Repairman (any industry). *See* Maintenance Machinist.
Industrial-Sewing-Machine Repairman (any industry). *See under* MAINTENANCE MECHANIC-REPAIRMAN.
Instrument Maker (any industry). *See under* MACHINIST.
Instrument Mechanic (air transportation; aircraft manufacturing). *See under* AIRPLANE MECHANIC.
Instrument Repairman (any industry). *See under* MAINTENANCE MECHANIC-REPAIRMAN.
Insulation Worker (construction; heat and frost insulation). *See* ASBESTOS WORKER.

**IRON WORKER** (any industry).
- Boatbuilder, Steel (shipbuilding) 4 years. 806.381; 819.380.
- Bridge-and-Structural-Steel Erector (construction) 2 years. 801.781.
- Ornamental-Iron Erector (construction) 2 years. 809.381.
- Ornamental Metal Fabricator (bronze, wire and metal specialties) 4 years. 809.381; 619.880.
- Reinforcing-Iron Worker (construction) 2 years. 801.884.
- Structural-Steel Fabricator (structural metals) 4 years. 619.380; 601.381.

Jacquard-Card Cutter (textile). *See* Jacquard Designer.
Jacquard Designer (textile). *See under* TEXTILE TECHNICIAN-MECHANIC.

**JEWELER** (jewelry).
- Caster-Mold Maker 3–4 years. 502.381; 700.381.
- Enameler 2–3 years. 740.884.
- Goldsmith 3–4 years. 700.281.
- Jewelry Repairman; bench hand 3 years. 700.281.
- Lapidary; brilliandeerer; stone cutter 3–4 years. 770.281.
- Stone Setter 3–4 years. 700.381.

Jewelry Repairman (jewelry). *See under* JEWELER.
Jig-and-Fixture Builder (aircraft manufacturing; automobile manufacturing). *See under* TOOL-AND-DIE-MAKER.

Jiggerman (pottery and porcelain). *See under* POTTERY WORKER.
Joiner (shipbuilding). *See under* CARPENTER.
Kiln Drawer (pottery and porcelain). *See under* POTTERY WORKER.
Kiln Placer (pottery and porcelain). *See under* POTTERY WORKER.
Knitter, Full Fashion (hosiery). *See under* TEXTILE TECHNICIAN-MECHANIC.
Knitting-Machine Mechanic (hosiery; knit goods). *See under* MAINTENANCE MECHANIC-REPAIRMAN.
Ladies Tailor (garment). *See* Sample Maker.
Lapidary (jewelry). *See under* JEWELER.
Lapper (jewelry). *See* Polisher-Finisher.

**LATHER** (construction) 2–3 years. 842.781.
Layout Man, Color (printing and publishing). *See under* ROTOGRAVURE ENGRAVER.

**LEAD BURNER** (chemical; petroleum and refining; shipbuilding) 5 years. 815.281.

**LEATHER WORKER** (any industry) 3–4 years.
Boot-and-Shoe Maker, Custom; boot maker, custom (boot and shoe manufacturing) 365.381.
Bottomer, Custom Shoes (boot and shoe manufacturing) 788.884.
Cutter-Patternmaker, shoes (boot and shoe manufacturing) 690.782.
Fitter, Custom Shoes (boot and shoe manufacturing) 690.782.
Harness Maker (leather products) 789.781.
Saddle Maker (leather products) 789.781.
Tanner (leather manufacturing) 585.884; 690.780; 589.387; 582.782.
Leather Worker (surgical-dental appliances). *See under* ORTHOPEDIC-PROSTHETIC TECHNICIAN.
Lens Grinder (optical goods). *See* Ophthalmic Surfacer.
Line-Service Mechanic (air transportation). *See under* AIRPLANE MECHANIC.
Lineman (light and power). *See under* ELECTRICAL WORKER.
Lineman (telephone and telegraph). *See under* TELEPHONE WORKER.
Liner (pottery and porcelain). *See under* POTTERY WORKER.
Linoleum-and-Soft Tile Layer (construction). *See* Linoleum, Soft Tile and Carpet Layer.
Linoleum, Soft Tile and Carpet Layer (construction). *See under* FLOOR COVERER.
Linotype Machinist (printing and publishing). *See* Composing-Room Machinist.
Lithoengraver (printing and publishing). *See* LITHOGRAPHER.

**LITHOGRAPHER,** •Lithoengraver (printing and publishing) 4–5 years.
•Camera Man; Photolithographer 972.832.
Lithographic-Press Assistant 2 years 651.782.
Lithographic Pressman; Offset Pressman 651.782.
•Platemaker; Transferer 972.381; 972.781.
Plate Grainer. 972.782.
Process Artist. 972.281.
Proofer. 651.782.
Stripper-and-Opaquer. 971.381.
Transferer, Hand. 972.381.
Lithographic-Press Assistant (printing and publishing). *See under* LITHOGRAPHER.
Lithographic Pressman (printing and publishing). *See under* LITHOGRAPHER.
Lock-and-Safe Repairman (any industry). *See under* MAINTENANCE MECHANIC-REPAIRMAN.
Locksmith (any industry). *See* Lock-and-Safe Repairman.
Loftsman (shipbuilding). *See under* CARPENTER.
Loom Fixer (textile). *See* Weave-Room Mechanic.
Machine-Man (stoneworking). *See* Machine Stone-Cutter.
Machine Set-Up Man (paper goods). *See* Cutting-and-Creasing Pressman.
Machine Stone-Cutter (stoneworking). *See under* STONE WORKER.

**MACHINIST** (any industry) 4 years. 600.280.
Aircraft Machinist (air transportation; aircraft manufacturing). 600.280.
Automobile Machinist (automotive service). 600.280.
Instrument Maker (any industry). 600.280.
Maintenance Machinist; industrial machine repairman (any industry). 600.280.
Marine Machinist (shipbuilding). 623.281.
Outside Machinist (any industry). 623.281; 600.280.
Precision-Tool Grinder (any industry). 600.280.
Roll Turner (iron and steel). 604.280.

**MAILER** (printing and publishing) 4–5 years. 239.587.
Maintenance Electrician (any industry). *See under* ELECTRICAL WORKER.
Maintenance Machinist (any industry). *See under* MACHINIST.

**MAINTENANCE MECHANIC-REPAIRMAN** (any industry).
Artillery Repairman; armament mechanic 4 years. 736.781; 632.281; 801.381.
Bakery Equipment Mechanic. 633.281.
Bookbinding-Machines Mechanic (printing and publishing) 4 years. 638.281.
Business-Machines Mechanic; duplicating-machines repairman; office-machines mechanic 3–4 years. 633.131; 633.281.
Camera Repairman 3 years. 714.281.
Chemical-Process-Equipment Mechanic (chemical) 4 years. 630.281.
Cigar-Making-Machine Mechanic (cigar manufacturing) 3–4 years. 629.281.
Composing-Room Machinist; montoype machinist; printing-equipment mechanic (printing and publishing) 5–6 years. 627.281.
Elevator Repairman 4 years. 825.381.
Gas-Engine Repairman (any industry) 3–4 years. 625.281.
Gas-Meter Repairman (light and power) 3 years. 710.281.
Gas Serviceman (public utilities) 3 years. 637.281.
Gun Repairman; gunsmith; small-arms repairman 3–4 years. 632.281.
Hydraulic-Equipment Mechanic (any industry) 3–4 years. 638.281.
Industrial-Sewing-Machine Repairman 3–4 years. 639.281.
Instrument Repairman 4 years. 710.281.
Knitting-Machine Mechanic; full-fashion-hosiery-knitting-machine mechanic; (hosiery; knit goods) 2–3 years. 689.280.
Lock-and-Safe Repairman; locksmith 3–4 years. 709.281.
Orthopedic-Shoe Repairman 3 years. 365.381.
Power-House Repairman (light and power) 3–4 years. 631.281.
Pump Repairman 3–4 years. 630.281.
Scale Repairman 3 years. 633.281.
Shoe Repairman 2–3 years. 365.381.
Watch-Clock Repairman 3–4 years. 715.281.
Wind-Tunnel-Maintenance Mechanic (aircraft manufacturing) 4 years. 827.381.
X-ray-Equipment Repairman 3–4 years. 729.281.
Marble Setter (construction). *See* Stone Setter.
Marine Electrician (any industry). *See* Ship Electrician.
Marine Machinist (shipbuilding). *See under* MACHINIST.

**MARKING-DEVICE MAKER** (marking device; printing and publishing) 2–3 years.
Rubber-Stamp Maker; rubber-die maker. 733.381.
Masker (printing and publishing). *See under* PHOTO ENGRAVER.

**MATTRESS MAKER, CUSTOM** (mattress) 2–3 years. 780.884.
Meat Cutter (retail trade). *See under* BUTCHER-MEAT CUTTER.
Mechanical Draftsman (any industry). *See under* DRAFTSMAN-DESIGNER.
Melter (foundry). *See under* FOUNDRYMAN.

Metal-Denture Maker (surgical-dental appliances). *See* Dental Technician.
Metal Engraver (engraving). *See under* ENGRAVER.
Metal Patternmaker (foundry). *See under* PATTERNMAKER.

**METAL POLISHER-AND-BUFFER** (any industry) 3–4 years. 705.884.
Polisher-Finisher; lapper (jewelry) 3 years. 705.884.
Sandbobber (holloware; silverware) 3 years. 705.884.
Metal-Sign Maker (sign). *See under* SHEET-METAL WORKER.
Metal Spinner (machine shop). *See under* SHEET-METAL WORKER.
Meterman (light and power). *See under* ELECTRICAL WORKER.
Meter-Relay Tester (light and power). *See* Meterman.
Meter Tester-Repairer (light and power). *See* Meterman.
Micro-Photographer (any industry). *See* Commercial Photographer.

**MILLER** (grain mill) 4 years. 521.782.
Millman (woodworking). *See under* CABINETMAKER-MILLMAN.

**MILLWRIGHT** (any industry) 4 years. 638.281.
Outside Machinist (any industry) 4 years.
Mobile-Military-Equipment Mechanic (ordnance). *See under* AUTOMOTIVE MECHANIC.

**MODEL MAKER** (any industry) 4 years.
Model Maker, Metal; experimental-body builder, metal 693.381; 600.280; 709.281.
Model Maker, Plastic 709.281; 693.381; 661.381.
Model Maker, Wood; experimental-body builder, wood 693.380; 668.381; 661.381.
Model-Mold Maker (stationery and art goods). *See under* PLASTERER.
Mold Loftsman (shipbuilding; aircraft manufacturing; boilermaker). *See under* BOILERMAKER.
Mold Maker (any industry). *See under* TOOL-AND-DIE-MAKER.
Mold Maker (pottery and porcelain). *See under* POTTERY WORKER.
Mold Maker, Wood (brick and tile). *See under* CARPENTER.
Molder (foundry). *See under* FOUNDRYMAN.
Molder (printing and publishing). *See under* ELECTROTYPER.
Monotype Machinist (printing and publishing). *See* Composing-Room Machinist.
Monument Maker (stoneworking). *See under* STONE WORKER.
Motorboat Mechanic (any industry). *See under* AUTOMOTIVE MECHANIC.
Motorcycle Mechanic (automotive service). *See under* AUTOMOTIVE MECHANIC.
Mounter (optical goods). *See* Ophthalmic Finisher.

**MUSICAL-INSTRUMENT MECHANIC** (musical instruments) 3–4 years.
Accordion Maker 730.281.
Musical-Instrument Repairman 730.281.
Piano Repairman-and-Tuner 730.281; 730.884.
Pipe Organ Builder 730.281.
Pipe Organ Installer-Repairman 730.381.
Stringed-Instrument Repairman 730.281.
Violin Maker 730.281.
Musical-Instrument Repairman (musical instruments). *See under* MUSICAL-INSTRUMENT MECHANIC.
Neon-Tube Bender (signs). *See under* GLAZIER-GLASS WORKER.
Newspaper (Web) Pressman (printing and publishing). *See under* PRINTING PRESSMAN.
Office-Machines Mechanic (any industry). *See* Business-Machines Mechanic.
Offset Pressman (printing and publishing). *See* Lithographic Pressman or *see under* PRINTING PRESSMAN.

**OPERATING ENGINEER:** Hoisting-and-Portable Engineer (construction) 3–4 years. 859.883.
Earth-moving Equipment Mechanic 620.884.
Grade-and-Paving-Equipment Operator 851.883; 852.883.

**OPERATING ENGINEER—Continued**

Heavy-Duty Repairman; construction-equipment mechanic 859.823.

Plant-Equipment Operator 859.883.

Universal-Equipment Operator 859.883.

Well Driller 859.782; 930.782; 930.280.

Operating Engineer, Stationary (any industry). *See* STATIONARY ENGINEER.

Ophthalmic Finisher (optical goods). *See under* OPTICAL TECHNICIAN.

Ophthalmic Surfacer (optical goods). *See under* OPTICAL TECHNICIAN.

**OPTICAL TECHNICIAN:** (optician optical goods) 4 years. 712.251; 713.381.

Ophthalmic Finisher; benchman; finisher; mounter 711.381.

Precision-Lens Grinder; precision-lens polisher 675.380; 711.781.

Ophthalmic Surfacer; lens grinder; surfacer 713.781.

Optician (optical goods). *See* OPTICAL TECHNICIAN.

Ornamental-Iron Erector (construction). *See under* IRON WORKER.

Ornamental-Metal Fabricator (bronze, wire and metal specialties). *See under* IRON WORKER.

Orthopedic-Shoe Builder (surgical appliances). *See under* ORTHOPEDIC-PROSTHETIC TECHNICIAN.

Orthopedic-Shoe Repairman (personal service). *See under* MAINTENANCE MECHANIC-REPAIRMAN.

**ORTHOPEDIC-PROSTHETIC TECHNICIAN** (surgical-dental appliances) 3–4 years.

Artificial Eye Maker. 713.281.

Dental Technician; dental-plate maker; metal-denture maker; porcelain-acrylic-denture maker 712.381; 712.281.

Orthopedic Appliance Technician 721.281.

Orthopedic-Shoe Builder; pedo-practor 712.281; 788.281.

Orthotist; brace maker 078.268; 712.281.

Prosthetist; artificial-limb maker, metal; artificial-limb maker, wood 712.281.

Leather Worker 712.781.

Orthotist (surgical-dental appliances). *See under* ORTHOPEDIC-PROSTHETIC TECHNICIAN.

Outside Electrician (light and power). *See* Lineman.

Outside Machinist (any industry). *See under* MACHINIST or MILLWRIGHT.

PBX Installer (telephone and telegraph). *See under* TELEPHONE WORKER.

**PAINT MAKER** (paint and varnish) 3–4 years. 550.782.

**PAINTER-AND-DECORATOR** (any industry).

Aircraft Painter-Doper (air transportation; aircraft manufacturing) 2–3 years. 849.781; 845.781.

Automobile Painter (automotive service) 3 years. 845.781.

Furniture Finisher; hardwood finisher (furniture) 2–3 years. 763.381.

Painter (construction) 3 years. 840.781.

Painter (shipbuilding) 3 years. 840.781.

Stained-Glass Painter (glass products) 4 years. 144.081.

Statuary Painter (statuary and art goods) 3 years. 144.081.

Painter (construction). *See under* PAINTER-AND-DECORATOR.

Painter (shipbuilding). *See under* PAINTER-AND-DECORATOR.

Panograph Engraver (any industry). *See under* ENGRAVER.

Paper-Goods-Machine Adjuster (paper goods; paper box manufacturing). *See* Cutting-and-Creasing Pressman.

Paper Ruler (printing and publishing). *See under* BOOKBINDER.

Pastry Cook (hotel and restaurant). *See under* COOK.

**PATTERNMAKER** (foundry) 5 years.

Metal Patternmaker 963.281.

Wood Patternmaker 661.281.

Plaster Patternmaker, plaster pattern caster (aircraft manufacturing). 777.381.

Patternmaker, Garment (garment). *See under* TAILOR.
Pedo-Practor (surgical appliances). *See* Orthopedic-Shoe Builder.

**PHOTOENGRAVER** (printing and publishing) 5–6 years.
- Copper Etcher 971.381.
- Finisher 971.391.
- Maker 971.684.
- Photographer 971.382.
- Proofer 651.782.
- Router-and-Blocker 979.782.
- Stripper-and-Printer 971.381.
- Tint Layer; ben-day artist 970.381.
- Zinc Etcher 971.381.

Photograph Retoucher (any industry). *See under* PHOTOGRAPHER.

**PHOTOGRAPHER** (any industry). 3 years.
- Commercial Photographer; micro-photographer 143.062.
- Film Developer-Printer, Motion Picture 976.782.
- Photograph Retoucher 970.281.
- Portrait Photographer 143.062.

Photographer (printing and publishing). *See under* PHOTOENGRAVER or ROTOGRAVURE ENGRAVER.
Photolithographer (printing and publishing). *See* Camera Man.
Piano Repairman-and-Tuner (musical instruments). *See under* MUSICAL-INSTRUMENT MECHANIC.
Picture Engraver (engraving). *See* Bank-Note Engraver.
Pipe Fitter (construction). *See under* PLUMBER-PIPE FITTER.
Pipe Organ Builder (musical instruments). *See under* MUSICAL-INSTRUMENT MECHANIC.
Pipe Organ Installer-Repairman (musical instruments). *See under* MUSICAL-INSTRUMENT MECHANIC.
Plant-Equipment Operator (construction). *See under* OPERATING ENGINEER.
Plaster-Pattern Caster (aircraft manufacturing). *See* Plaster Patternmaker.
Plaster Patternmaker (aircraft manufacturing). *See under* PATTERNMAKER.

**PLASTERER** (construction) 3–4 years.
- Caster 842.781.
- Model-Mold Maker (stationery and art goods) 777.381.
- Plasterer 842.781.
- Plate Grainer 972.782.
- Plater, Plastics (Vacuum System) 500.380.

Plastic Mold-and-Fixture Maker (fabric, plastic products). *See under* TOOL-AND-DIE MAKER.
Plastics-Tool-and-Die Maker (any industry). *See under* TOOL AND DIE MAKER.
Plate Grainer (printing and publishing). *See under* LITHOGRAPHER.

**PLATE PRINTER** (printing and publishing). 4 years.
- Die Stamper; steel-die embosser 651.282.
- Plate Printer; engraving pressman; pressman, copperplate 651.782.

Platen Pressman (printing and publishing). *See under* PRINTING PRESSMAN.
Platemaker (printing and publishing). *See under* LITHOGRAPHER.
Plater (electroplating). *See under* ELECTROPLATER.
Plater, Plastics (Vacuum System). *See under* ELECTROPLATER.
Plumber (any industry). *See under* PLUMBER-PIPE FITTER.

**PLUMBER-PIPE FITTER** (any industry) 4–5 years.
- Gas Fitter 862.381.
- Pipe Fitter 862.381; 862.281.

**PLUMBER-PIPE FITTER—Continued**

Plumber 862.381.
Sprinkler Fitter 862.381.
Steamfitter 862.381.

Polisher-Finisher (jewelry). *See under* METAL POLISHER-AND-BUFFER.
Porcelain-Acrylic-Denture Maker (surgical-dental appliances). *See* Dental Technician.
Portrait Photographer (any industry). *See under* PHOTOGRAPHER.

**POTTERY WORKER** (pottery and porcelain) 3 years.

Caster 575.884.
Decorating-Kiln Placer 573.782.
Dipper 774.884; 570.885.
Handler 575.884.
Jiggerman 774.884.
Kiln Drawer 573.887.
Kiln Placer 573.886.
Liner 740.381.
Mold Maker 777.781.
Sagger Maker 774.784.
Tinter 970.381.
Turner 774.884.

Power-House Electrician (light and power). *See under* ELECTRICAL WORKER.
Power-House Engineer (any industry). *See under* STATIONARY ENGINEER.
Power-House Operator (light and power). *See under* STATIONARY ENGINEER.
Power-House Repairman (light and power). *See under* MAINTENANCE MECHANIC-REPAIRMAN.
Power-Plant-Equipment Mechanic (light and power). *See under* ELECTRICAL WORKER.
Precision-Lens Grinder (optical goods). *See under* OPTICAL TECHNICIAN.
Precision-Lens Polisher (optical goods). *See* Precision-Lens Grinder.
Precision-Tool Grinder (any industry). *See under* MACHINIST.
Press Assistant (all branches) (printing and publishing). *See under* PRINTING PRESSMAN.
Pressman, Copperplate (printing and publishing). *See* Plate Printer.
Print Cutter-Roller Router (wall paper). *See under* WALL-PAPER CRAFTSMAN.
**PRINTER:** Compositor (printing and publishing) 5–6 years. 973.381.
Printer-Slotter (printing and publishing). *See* Cutting-and-Creasing Pressman.
Printing-Equipment Mechanic (printing and publishing). *See* Composng-Room Machinist.

**PRINTING PRESSMAN** (printing and publishing).

Cutting-and-Creasing Pressman; envelope-machine adjuster; machine setup man; paper-goods-machine adjuster; printer-slotter (paper goods; paper box manufacturing). 649.782; 651.782; 641.885.
Cylinder Pressman 4–5 years. 651.782.
Embossing Pressman (printing and publishing) 4–5 years. 659.782.
Newspaper (Web) Pressman 4–5 years. 651.782.
Offset Pressman 4–5 years. 651.782.
Platen Pressman 4–5 years. 651.782.
Press Assistant (All Branches) 2–3 years. 751.782.
Rotary (Magazine) Pressman 4–5 years. 751.782.
Specialty Pressman; bread wrapper-and-label pressman 4–5 years. 751.782.

Process Artist (printing and publishing). *See under* LITHOGRAPHER.
Proofer (printing and publishing). *See under* PHOTOENGRAVER or LITHOGRAPHER.
Propeller Mechanic (air transportation; aircraft manufacturing). *See under* AIRPLANE MECHANIC.
Prosthetist (surgical-dental appliances). *See under* ORTHOPEDIC-PROSTHETIC TECHNICIAN.
Pump Repairman (any industry). *See under* MAINTENANCE MECHANIC-REPAIRMAN.

Pyrometer Man (any industry). *See* Electrical-Instrument Repairman.
Radio Electrician (broadcast-telecast). *See under* ELECTRICAL WORKER.
Radio Mechanic (air transportation; aircraft manufacturing). *See under* AIRPLANE MECHANIC.
Radio Repairman (any industry). *See* Electronic Technician.
Radio-Station-Maintenance Electrician (broadcast-telecast). *See* Radio Electrician.
Radio-Station Technician (broadcast-telecast.) *See* Radio Electrician.
Radio-Telephone-Communications Technician (telephone and telegraph). *See under* ELECTRICAL WORKER.
Radio-Television Repairman (any industry). *See* Electronic Technician.
Ready-to-Wear Tailor (retail trade). *See* Alteration Tailor.
Reinforcing-Iron Worker (construction). *See under* IRON WORKER.
Repairer-and-Winder (any industry). *See under* ELECTRICAL WORKER.

**RIGGER** (any industry) 2 years. 921.280.
Ship Rigger (shipbuilding) 4 years. 806.281.

**RIVER PILOT** (water transportation) 3 years. 197.133.
Roll Turner (iron and steel). *See under* MACHINIST.

**ROOFER** (construction) 2–3 years.
Composition Roofer 866.381.
Damper-Waterproofer 843.884.
Slate-and-Tile Roofer 866.381.
Rotary (Magazine) Pressman (printing and publishing.) *See under* PRINTING PRESSMAN.
Roto Etcher (printing and publishing). *See under* ROTOGRAVURE ENGRAVER.
Roto Plater-Grinder (printing and publishing). *See under* ROTOGRAVURE ENGRAVER.
Roto Printer-Transferer (printing and publishing). *See under* ROTOGRAVURE ENGRAVER.
Roto Retoucher (printing and publishing). *See under* ROTOGRAVURE ENGRAVER.
Roto Stager (printing and publishing). *See under* ROTOGRAVURE ENGRAVER.

**ROTOGRAVURE ENGRAVER** (printing and publishing) 5–6 years.
Layout Man, Color 141.081.
Photographer 971.381.
Roto Etcher 971.381.
Roto Plater-Grinder 500.781.
Roto Printer-Transferer 976.782.
Roto Retoucher 970,381.
Roto Stager 971.884.
Router-and-Blocker (printing and publishing). *See under* PHOTO ENGRAVER.
Rubber-Die Maker (marking devices; printing and publishing). *See* Rubber-Stamp Maker.
Rubber-Stamp Maker (marking devices). *See under* MARKING-DEVICE MAKER.
Saddle Maker (leather products). *See under* LEATHER WORKER.
Sagger Maker (pottery and porcelain). *See under* POTTERY WORKER.
Sailmaker (shipbuilding). *See under* CANVAS WORKER.
Sample Maker (garment). *See under* TAILOR.
Sandblaster (stoneworking). *See* Granite Cutter, Sandblaster.
Sandbobber (holloware; silverware). *See under* METAL POLISHER-AND-BUFFER.
Saw Straightener-and-Repairer (saw manufacturing). *See* Sawsmith.
Sawsmith (saw manufacturing). *See under* BLACKSMITH.
Scale Repairman (any industry). *See under* MAINTENANCE MECHANIC-REPAIRMAN.
Sheet-Metal Mechanic (construction; sheet metal; shipbuilding). *See* Sheet-Metal Worker *under* SHEET-METAL WORKER.

**SHEET-METAL WORKER** (any industry) 3–4 years.
Aircraft Metalsmith (air transportation; aircraft manufacuring) 804.281.
Coppersmith (sheet metal; shipbuilding) 804.281; 862.281.

**SHEET-METAL WORKER—Continued**

Metal-Sign Maker (signs) 804.281.
Metal Spinner (machine shop) 619.782.
Sheet-Metal Worker; sheet-metal mechanic; sheet-metal worker, shop (construction; sheet-metal; shipbuilding) 804.281.

Sheet-Metal Worker, Shop (construction; sheet metal; shipbuilding). *See* Sheet-Metal Worker.
Ship Electrician (shipbuilding). *See under* ELECTRICAL WORKER.
Ship Rigger (shipbuilding). *See under* RIGGER.
Shipfitter (shipbuilding). *See under* BOILERMAKER.
Shipwright (shipbuilding). *See under* CARPENTER.
Shirt Cutter (garment). *See under* FABRIC CUTTER.
Shoe-Last Maker, Wood (boot and shoe manufacturing). *See under* WOOD CARVER.
Shoe Repairman (personal service). *See under* MAINTENANCE MECHANIC-REPAIRMAN.
Shop Carpenter (woodworking). *See* Millman.
Shop Electrician (any industry). *See* Repairer-and-Winder.
Shop Tailor (garment). *See* Tailor (garment) *under* TAILOR.
Shuttlemaker (textile). *See under* WOOD CARVER.
Siderographer (engraving). *See under* ENGRAVER.

**SIGN, SCENE-AND-PICTORIAL ARTIST** (any industry) 3–4 years. 970.381.

Commercial Artist 2 years. 144.081; 970.381; 142.081.
Sign Painter, Hand (all branches) 970.381.
Silk-Screen-Process Printer 979.381.

Sign Electrician (signs). *See under* ELECTRICAL WORKER.
Sign Painter, Hand (all branches) (any industry). *See under* SIGN, SCENE-AND-PICTORIAL ARTIST.
Signal-System Electrician (any industry). *See under* ELECTRICAL WORKER.
Silk-Screen-Process Printer (any industry). *See under* SIGN, SCENE-AND-PICTORIAL ARTIST.

**SILVERSMITH** (silverware) 3–4 years. 700.281.

Solderer 700.781.
Spinner 619.782.

Sketch Maker (wall paper). *See under* WALL-PAPER CRAFTSMAN.
Slate-and-Tile Roofer (construction). *See under* ROOFER.
Small-Arms Repairman (firearms; ordnance). *See* Gun Repairman.
Solderer (silverware). *See under* SILVERSMITH.
Specialty Pressman (printing and publishing). *See under* PRINTING PRESSMAN.
Spindle Carver (textile). *See under* WOOD CARVER.
Spinner (silverware). *See under* SILVERSMITH.
Spinning-Room Mechanic, Mule or Ring (textile). *See under* TEXTILE TECHNICIAN-MECHANIC.
Spring Fitter-Repairer (automobile manufacturing; automotive service). *See* Spring Maker, Automotive.
Spring Maker, Automotive (automobile manufacturing; automotive service). *See under* BLACKSMITH.
Sprinkler-Fitter (any industry). *See under* PLUMBER-PIPE FITTER.
Stained-Glass Glazier (glass products). *See under* GLAZIER-GLASS WORKER.
Stained-Glass Painter (glass products). *See under* PAINTER-AND-DECORATOR.

**STATIONARY ENGINEER:** Operating Engineer, Stationary (any industry). 3–4 years. 950.757.

Power-House Engineer (light and power) 952.787.
Power-House Operator; substation operator; switchboard operator (light and power) 952.987; 952.782.

Statuary Painter (statuary and art goods). *See under* PAINTER-AND-DECORATOR.
Steamfitter (construction). *See under* PLUMBER-PIPE FITTER.

Steel-and-Copper-Plate Engraver (printing and publishing). *See under* ENGRAVER.
Steel-Die Embosser (printing and publishing). *See* Die Stamper.
Steel-Rule Die Maker (paper goods). *See* Cutting-Die Maker.

**STEREOTYPER** (printing and publishing) 5–6 years. 975.782.
Stone Carver (stoneworking). *See* Monument Maker.
Stone Cutter (jewelry). *See* Lapidary.
Stone Cutter (stoneworking). *See under* STONE WORKER.
Stone Polisher (stoneworking). *See under* STONE WORKER.
Stone Sawyer (stoneworking). *See under* STONE WORKER.
Stone Setter (construction). *See under* STONEMASON.
Stone Setter (jewelry). *See under* JEWELER.

**STONE WORKER** (Stoneworking).
- Granite Cutter, Sandblaster; sandblaster 3 years. 771.281.
- Granite Surface Plate Lapper 775.281.
- Machine Stone-Cutter; granite-lathe operator; machine man 2–3 year. 673.782; 675.782; 673.782.
- Monument Maker; stone carver 3–4 years. 771.281.
- Stone Cutter; granite cutter 3 years. 771.381.
- Stone Polisher; turner-polisher 2 years. 673.782; 775.884.
- Stone Sawyer, granite sawyer 2 years. 677.782; 670.782.

**STONEMASON** (construction) 3 years. 861.781.
- Stone Setter; marbel setter 861.381.

**STOVE MOUNTER** (stove) 3 years. 706.887; 869.281.
Stringer-Instrument Repairman (musical instruments). *See under* MUSICAL-INSTRUMENT MECHANIC.
Stripper-and-Opaquer (printing and publishing). *See under* LITHOGRAPHER.
Stripper-and-Printer (printing and publishing). *See under* PHOTO ENGRAVER.
Structural Draftsman (any industry). *See under* DRAFTSMAN-DESIGNER.
Structural-Steel Fabricator (structural metal). *See under* IRON WORKER.
Substation Operator (light and power). *See* Power-House Operator.
Surfacer (optical goods). *See* Ophthalmic Surfacer.
Switchboard Operator (light and power). *See* Power-House Operator.

**TAILOR** (garment; retail trade) 4 years. 785.261.
- Alteration Tailor; bushelman; ready-to-wear tailor (retail trade) 2 years. 785.281.
- Custom Tailor (retail trade) 4 years. 785.261.
- Finisher; tailoress (garment) 2 years. 782.884.
- Patternmaker, Garment (garment) 3 years. 781.381.
- Sample Maker; ladies tailor (garment) 3–4 years. 785.381.
- Tailor; shop tailor (garment) 3–4 years. 785.381.

Tailoress (garment). *See* Finisher.
Tanner (leather manufacturing). *See under* LEATHER WORKER.

**TELEPHONE WORKER** (telephone and telegraph) 4 years.
- Cable Splicer 829.381.
- Central Office Installer-Repairman 822.381; 822.281.
- Combination Man 822.281.
- Lineman 822.381.
- PBX Installer 822.281; 822.381.

Television Repairman (any industry). *See* Electronic Technician.
Template Maker (shipbuilding; aircraft manufacturing; boilermaker). *See* Mold Loftsman.
Tent-Awning Maker (canvas goods). *See under* CANVAS WORKER.

**TERRAZZO WORKER** (construction) 3 years. 861.781.

**TEXTILE TECHNICIAN MECHANIC** (textile).

Card-Room Mechanic 3–4 years. 681.280.
Comb Fixer 3–4 years. 681.280.
Drawing-Frame Fixer 3–4 years. 681.280.
Dyer, Master 3–4 years. 582.138.
Jacquard Designer; jacquard-card cutter 4 years. 685.781; 683.782; 142.081.
Knitter, Full Fashion 2–3 years. 654.782.
Spinning-Room Mechanic, Mule or Ring 3–4 years. 681.280.
Twister-Frame Fixer 3–4 years. 681.280.
Warp-Preparation Mechanic 3–4 years. 681.280.
Weave-Room Mechanic; loom fixer 3–4 years. 683.280.
Weaver 2–3 years. 683.787.
Wool Sorter 2–3 years. 589.387.

**TILE SETTER:** Tile Layer (construction) 3 years. 861.781.
Tile Layer (construction). *See* TILE SETTER.
Tint Layer (printing and publishing). *See under* PHOTOENGRAVER.
Tinter (pottery and porcelain). *See under* POTTERY WORKER.
Tool-and-Die Designer (machine shop). *See under* DRAFTSMAN-DESIGNER.

**TOOL-AND-DIE MAKER** (any industry).

Cutting-Die Maker; die maker, paper; steel-rule-die maker (any industry) 4 years. 739.381.
Diamond-Die Maker (machine shop; wire drawing) 4 years. 770.781.
Die-Casting-Die Maker (machine shop) 4 years. 601.280.
Die Maker 4–5 years. 601.281.
Die Maker (Carbide Tools) 601.281.
Die Maker; hub cutter (jewelry) 4 years. 601.381.
Die Sinker; trimmer-die sinker and/or impression-die sinker (machine shop) 4–8 years. 601.280.
Gage Maker (machine shop) 4–5 years. 601.281.
Jig-and-Fixture Builder (aircraft manufacturing; automobile manufacturing) 4 years. 693.280.
Mold Maker (machine shop) 4 years. 600.280; 705.884.
Plastic Mold-and-Fixture Maker (fabric, plastics products) 3 years. 754.381.
Plastic-Tool-and-Die Maker 4 years. 601.280.
Tool-and-Die Repairman (machine shop) 4–5 years. 601.280.
Tool Maker (machine shop) 4–5 years. 601.280.
Tool Maker (jewelry) 4 years. 601.280.
Wood Tool Maker (aircraft manufacturing) 4 years. 693.280.

Tool-and-Die Repairman (machine shop). *See under* TOOL-AND-DIE MAKER.
Tool Dresser (any industry). *See under* BLACKSMITH.
Tool Maker (jewelry). *See under* TOOL-AND-DIE MAKER.
Tool Maker (machine shop). *See under* TOOL-AND-DIE MAKER.
Tool Sharpener (stoneworking). *See under* BLACKSMITH.
Topographical Draftsman (any industry). *See under* DRAFTSMAN-DESIGNER.
Tractor Mechanic (automotive service). *See under* AUTOMOTIVE MECHANIC.
Transferer, Hand (printing and publishing). *See under* LITHOGRAPHER.
Transferer (printing and publishing). *See* Platemaker.
Trimmer-Die Sinker (machine shop). *See* Die Sinker.
Truck-and-Trailer-Body Builder (automotive service). *See under* AUTOMOTIVE BODY BUILDER REPAIRMAN.
Truck Mechanic (automotive service). *See under* AUTOMOTIVE MECHANIC.
Turner (pottery and porcelain). *See under* POTTERY WORKER.
Turner-Polisher (stoneworking). *See* Stone Polisher.

Twister-Frame Fixer (textile). *See under* TEXTILE TECHNICIAN-MECHANIC.
Underground Electrician (construction; light and power). *See* Cable Splicer.
Universal-Equipment Operator (construction). *See under* OPERATING ENGINEER.

**UPHOLSTERER** (any industry) 3–4 years.
Automobile Upholsterer (automotive service). 780.381.
Upholsterer (furniture) 780.381.
Upholstery Repairman 780.381.
Upholstery-and-Seat-Cover Cutter (any industry). *See under* FABRIC CUTTER.
Upholstery-Repairman (any industry). *See under* UPHOLSTERER.
Violin Maker (musical instruments). *See under* MUSICAL-INSTRUMENT MECHANIC.

**WALLPAPER CRAFTSMAN** (wallpaper).
Color Mixer 4 years. 550.884.
Print Cutter-Roller Router 4–5 years. 979.281.
Sketch Maker 5 years. 979.781.
Wallpaper Printer 4 years. 652.782.
Wallpaper Printer (wallpaper). *See under* WALLPAPER CRAFTSMAN.
Warp-Preparation Mechanic (textile). *See under* TEXTILE TECHNICIAN-MECHANIC.
Watch-Clock Repairman (any industry). *See under* MAINTENANCE MECHANIC-REPAIRMAN.
Wax Engraver (printing and publishing). *See under* ELECTROTYPER.
Weave-Room Mechanic (textile). *See under* TEXTILE TECHNICIAN-MECHANIC.
Weaver (textile). *See under* TEXTILE TECHNICIAN-MECHANIC.
Well Driller (construction). *See under* OPERATING ENGINEER.
Wind-Tunnel-Maintenance Mechanic (aircraft manufacturing). *See under* MAINTENANCE MECHANIC-REPAIRMAN.
Window-Glass Cutter (glass manufacturing). *See under* GLAZIER-GLASS WORKER.
Wireman (construction). *See* Electrician (construction).
**WIRE WEAVER** (wirework) 3–4 years. 709.884; 616.885.
Wood-Block Engraver (textile; printing and publishing). *See under* ENGRAVER.
Wood Carver, Hand (any industry). *See under* WOOD CARVER.

**WOOD CARVER** (any industry) 3–5 years. 761.281; 661.381; 664.782.
Battenmaker (textile).
Shoe-Last Maker, Wood (boot and shoe manufacturing).
Shuttlemaker (textile).
Spindle Carver (furniture).
Wood Carver, Hand (any industry).
Wood Patternmaker (foundry). *See under* PATTERNMAKER.
Wood-Tool Maker (aircraft manufacturing). *See under* TOOL-AND-DIE MAKER.
Wool Sorter (textile). *See under* TEXTILE TECHNICIAN-MECHANIC.
X-ray Equipment Repairman (any industry). *See under* MAINTENANCE MECHANIC-REPAIRMAN.
Zinc Etcher (printing and publishing). *See under* PHOTOENGRAVER.

# REGIONAL OFFICES

## Bureau of Apprenticeship and Training

### REGIONAL OFFICE, BOSTON

(Maine, N.H., Vt., Mass., R.I., Conn.)
John F. Kennedy Federal Bldg.
Government Center
Boston, Mass. 02203

### REGIONAL OFFICE, NEW YORK

(N.Y., N.J., Puerto Rico, Virgin Islands)
Room 906, 341 Ninth Ave.
New York, N.Y. 10001

### REGIONAL OFFICE, CHAMBERSBURG

(Pa., Del., Va., Md., W. Va., N.C.)
Room 321
Professional Arts Bldg.
Chambersburg, Pa. 17201

### REGIONAL OFFICE, ATLANTA

(S.C., Tenn., Ga., Miss., Fla., Ala.)
Room 729, Peachtree Bldg.
17th and Peachtree Sts. NE.
Atlanta, Ga. 30309

### REGIONAL OFFICE, CHICAGO

(Ill., Ind., Ky., Mich., Ohio, Minn., Wis.)
Room 858
219 South Dearborn St.
Chicago, Ill. 60604

### REGIONAL OFFICE, KANSAS CITY

(Colo., Mont., N. Dak., S. Dak., Iowa, Kans., Mo., Nebr., Utah, Wyo.)
Room 2107, Federal Office Bldg.
911 Walnut St.
Kansas City, Mo. 64106

### REGIONAL OFFICE, DALLAS

(La., Tex., N. Mex., Okla., Ark.)
Room 312, 411 N. Akard St.
Dallas, Texas 75201

### REGIONAL OFFICE, SAN FRANCISCO

(Ariz., Hawaii, Nev., Calif.)
450 Golden Gate Ave.
Room 10451
P.O. Box 36017
San Francisco, Calif. 94102

### REGIONAL OFFICE, SEATTLE

(Alaska, Idaho, Wash., Oreg.)
1809 Smith Tower
506 Second Ave.
Seattle, Wash. 98104

## STATE APPRENTICESHIP AGENCIES

(Including the District of Columbia, Puerto Rico, and the Virgin Islands.)

**Arizona**
Arizona Apprenticeship Council,
1623–B West Adams,
Phoenix 85007

**California**
Division of Apprenticeship Standards,
Department of Industrial Relations,
San Francisco 94102

**Colorado**
Colorado Apprenticeship Council,
% Industrial Commission,
Denver 80203

**Connecticut**
Apprentice Training Division,
Labor Department,
Wethersfield 06109

**Delaware**
Delaware State Apprenticeship and Training Council,
Department of Labor and Industry,
Wilmington 19801

**District of Columbia**
District of Columbia Apprenticeship Council,
1145 19th St., NW.
Washington 20036

**Florida**
Department of Apprenticeship,
Florida Industrial Commission,
Tallahassee 32304

**Hawaii**
Apprenticeship Division,
Department of Labor and Industrial Relations,
Honolulu 96813

**Kansas**
Kansas Apprenticeship Council,
Department of Labor,
Topeka 66603*

**Kentucky**
Kentucky State Apprenticeship Council,
Department of Labor,
Frankfort 40601

**Louisiana**
Division of Apprenticeship,
Department of Labor,
Baton Rouge 70804

**Maine**
Maine Apprenticeship Council,
Department of Labor and Industry,
State Office Bldg.,
Augusta 04330

**Maryland**
Maryland Apprenticeship and Training Council,
Department of Labor and Industry,
Baltimore 21201

**Massachusetts**
Division of Apprentice Training,
Department of Labor and Industries,
Boston 02202

**Minnesota**
Division of Voluntary Apprenticeship,
Department of Labor and Industry,
St. Paul 55101

**Montana**
Montana Apprenticeship Council,
Department of Labor and Industry,
Helena 59601

Nevada
Nevada Apprenticeship Council,
Department of Labor,
Carson City 89701

New Hampshire
New Hampshire Apprenticeship Council,
Department of Labor,
Concord 03301

New Mexico
New Mexico Apprenticeship Council,
Labor and Industrial Commission,
Albuquerque 87101

New York
Bureau of Apprentice Training,
Department of Labor,
Albany 12226

North Carolina
Division of Apprenticeship Training,
Department of Labor,
Raleigh 27602

Ohio
Ohio State Apprenticeship Council,
Department of Industrial Relations,
Columbus 43215

Oregon
Oregon Apprenticeship Council,
Bureau of Labor,
Portland 97201

Pennsylvania
Pennsylvania Apprenticeship and Training Council,
Department of Labor and Industry,
Harrisburg 17120

Puerto Rico
Apprenticeship Division,
Department of Labor,
San Juan 00908

Rhode Island
Rhode Island Apprenticeship Council,
Department of Labor,
Providence 02903*

Utah
Utah Apprenticeship Council,
Industrial Commission,
Salt Lake City 84111

Vermont
Vermont Apprenticeship Council,
Department of Industrial Relations,
Montpelier 05601

Virginia
Division of Apprentice Training,
Department of Labor and Industry,
Richmond 23214

Washington
Washington Apprenticeship Council,
Department of Labor and Industries,
Olympia 98501

Wisconsin
Apprenticeship Division,
Wisconsin Industrial Commission,
Madison 53203

Virgin Islands
Virgin Islands Apprenticeship Council,
Department of Agriculture and Labor,
Christiansted, St. Croix 00820

*All agencies, with the exception of Kansas and Rhode Island, operate under apprenticeship and/or training laws enacted by the legislature. Agencies in Kansas and Rhode Island function under executive order of the governor.



U.S. GOVERNMENT PRINTING OFFICE : 1968—O-292-752